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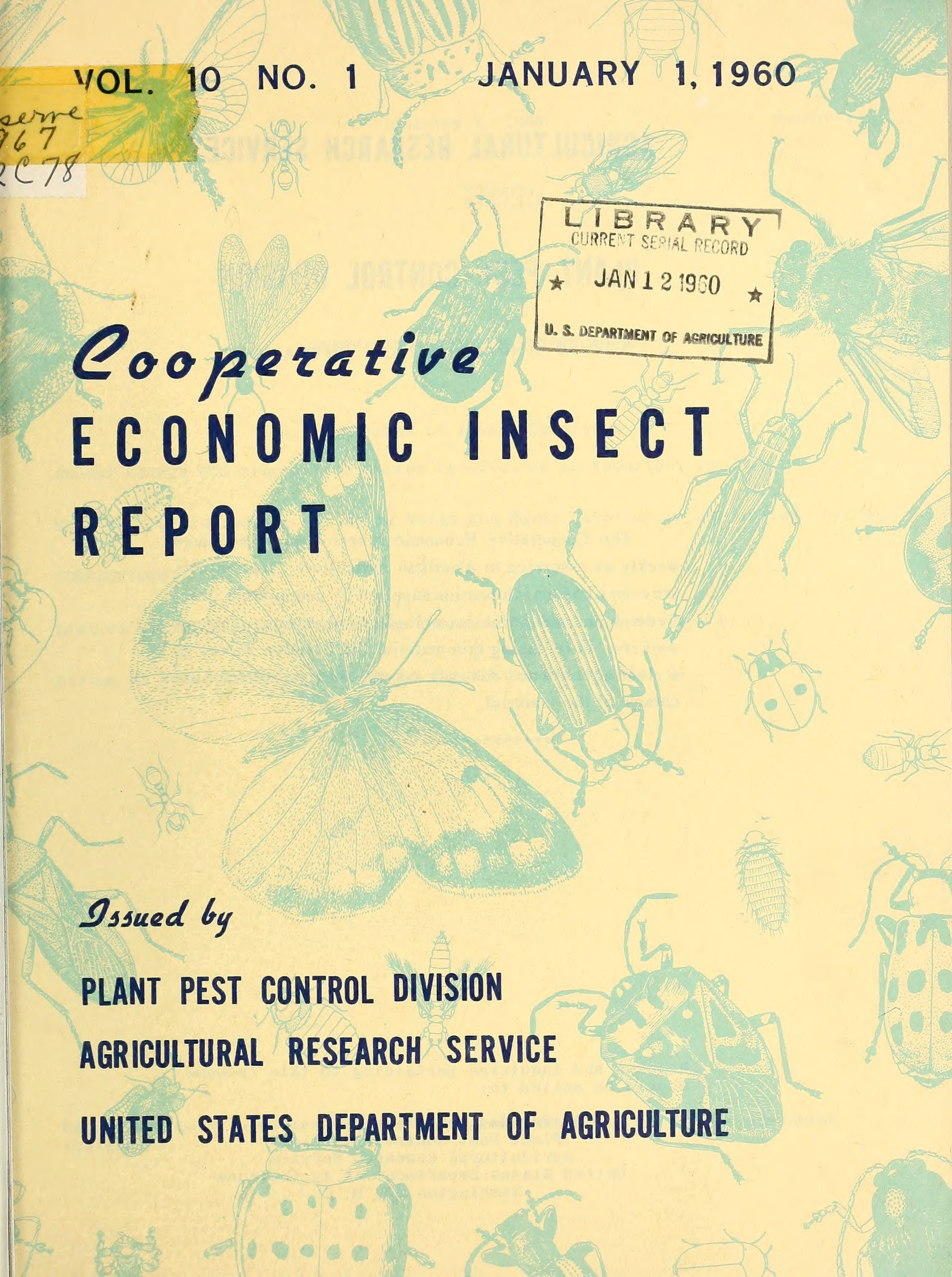

Cooperative ECONOMIC INSECT REPORT

Issued by

PLANT PEST CONTROL DIVISION
AGRICULTURAL RESEARCH SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

SURVEY AND DETECTION OPERATIONS

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Survey and Detection Operations
Plant Pest Control Division
Agricultural Research Service
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COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

Annual CHINCH BUG hibernation survey in Illinois is reported. (p. 3).

BOLL WEEVIL hibernation survey in North and South Carolina is summarized. (p. 4).

CORRECTIONS (p. 5).

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Status of some IMPORTANT INSECTS in the United States. (p. 9).

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Reports in this issue are for the week ending December 25, unless otherwise designated.

WEATHER OF THE WEEK ENDING DECEMBER 28

Last week's weather generally was characterized by mild temperatures and frequent, widespread precipitation with considerable snowfall in the North. A cold air mass which moved over the East at the end of the previous period remained over that section nearly all week, and average temperatures for the week ranged from near normal in the Southeast to several degrees below normal in the Northeast. The latter area experienced its first cold week since the third week in November and its coldest weather so far this winter early in the week when minima fell to subzero levels in many sections on the 23rd and 24th, with a low of -34° at Wanakena, New York, on the 23rd. Temperatures in the East moderated throughout the week, rising to above normal levels by the weekend. Temperatures for the week in the Midcontinent area averaged from 3° above normal in most southern sections to as much as 20° above in the extreme northern Great Plains where mild temperatures have prevailed for 4 consecutive weeks. Temperaturewise the week was near normal in the Far West.

Precipitation for the week exceeded a half inch in the Midcontinent area, along the Pacific Coast, and in many southern sections west of the Continental Divide. Much of the lower and upper portions of the Mississippi Valley and the Great Lakes region received 1 to over 2 inches as did also some local areas in the Far Southwest. Most of the week's precipitation fell during the passage of a storm which moved into the Far West on the 24th and was centered over Iowa on the 28th. This storm brought beneficial precipitation to nearly all of the Far West. Light to moderate snow accumulation occurred in most mountain areas, with heavy amounts of 3 feet in the northern mountains of Utah, and amounts equivalent to 2 inches of water in some sections of the White and San Francisco Mountains in Arizona. A Midwestern storm early in the week brought heavy snow to the Great Lakes region. Wisconsin reported 5 to 20 inches of snow, with falls in the southeastern portion of the State the heaviest for December in the last 20 years. At the same time another storm covered the Northeast, with depths ranging from 1 to 5 inches in many sections. More snow fell in north-central areas over the weekend and high winds created near blizzard conditions over sections of the northern Great Plains and upper Mississippi Valley. (Summary supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

CHINCH BUG (*Blissus leucopterus*) - ILLINOIS - The 1959 survey began November 18 and ended December 5. Results of the survey show an increase in populations and an expansion in the area rating a light to severe infestation. For several previous years, populations have been gradually declining and the area of light to severe infestations diminishing. The 1959 survey indicates that populations may be increasing again. County ratings were severe in 6, moderate in 2 and light in 11 compared with one severe, 6 moderate and 8 light in 1958. The present hibernating population has the potential of causing some damage in the central area to small grain and corn fields in 1960. The following counties have ratings of moderate to severe and under favorable conditions can expect some damage to occur in 1960: Tazewell, McLean, De Witt, Macon, Piatt, Douglas, Sangamon and Christian. Although not quite averaging a moderate rating, populations in Logan, Mason, Menard and southwestern Champaign Counties show possibilities of being damaging in some areas. (Ill. Ins. Rpt.).

GREENBUG (*Toxoptera graminum*) - OKLAHOMA - Populations continue low in areas checked during past 2 weeks. (VanCleave et al.).

SPOTTED ALFALFA APHID (*Therioaphis maculata*) - OKLAHOMA - Recent rains reduced populations in north central area of State. Counts averaged 29 per square foot of crown area in alfalfa. (Bryan).

FRUIT INSECTS

SCALE INSECTS - CALIFORNIA - *Aonidiella aurantii*, *Parlatoria oleae* and *Aspidiotus perniciosus* infestations medium on almond in Marysville, Yuba County. (Cal. Coop. Rpt.).

TRUCK CROP INSECTS

CABBAGE LOOPER (*Trichoplusia ni*) - Medium on various vegetable crops in lower Rio Grande Valley. (Deer, Dec. 21).

A FALSE CHINCH BUG (*Nysius* sp.) - TEXAS - Light to medium on endive and escarole in lower Rio Grande Valley. (Deer, Dec. 21).

HARLEQUIN BUG (*Murgantia histrionica*) - TEXAS - High infestation caused severe damage to mustard, turnips and radishes in lower Rio Grande Valley. (Deer, Dec. 21).

SALT-MARSH CATERPILLAR (*Estigmene acrea*) - TEXAS - Light to medium infestation invading some vegetable fields in the lower Rio Grande Valley. (Deer, Dec. 21).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

SOUTHERN PINE BEETLE (*Dendroctonus frontalis*) - TEXAS - Infestations continued active with eleven spots uncontrolled. Wet ground conditions prevented control crews from reaching some infested spots. Aerial detection flights will continue. (Young).

A SCALE INSECT (*Aspidiotus lataniae*) - CALIFORNIA - Heavy infestations, principally on bark and trunks of young mulberry trees, in Salida, Stanislaus County. (Cal. Coop. Rpt.).

AN APHID (Cinara tujafilina) - OKLAHOMA - Fifteen to twenty percent of arborvitae sampled in Stillwater area has heavy infestations. (Bieberdorf).

MEXICAN MEALYBUG (Phenacoccus gossypii) - CALIFORNIA - Heavy populations in conjunction with Myzus persicae on hedge plants in Watsonville, Santa Cruz County. (Cal. Coop. Rpt.).

COTTON INSECTS

BOLL WEEVIL (Anthonomus grandis) - NORTH and SOUTH CAROLINA - Fall surface woods trash collections were made during the fall of 1959 in the same areas of these two states as they were in the fall of 1956, 1957 and 1958. In each area a total of 30 locations (farm sites) were sampled, with 3 samples of 2 square yards each being taken at each location. Sampling was begun on November 18 and completed in all areas on December 22. The average number of hibernating weevils per acre for the four areas represented in the North and South Carolina survey are tabulated below. (A. R. Hopkins et al.). The data from the Coastal Plains district was previously reported in CEIR 9(52):1061-63, as was the data from Texas, Tennessee, Missouri, Louisiana and Mississippi).

Fall Surface Trash Examinations for Hibernating Boll Weevils
in North and South Carolina

Area	Location	Number of Live Weevils Per Acre 1958	Number of Live Weevils Per Acre 1959
1	South central section of South Carolina (Orangeburg, Bamberg, Dorchester Counties)	995	1,318
2	Coastal Plains of North and South Carolina (Florence, Darlington and Marlboro Counties, S.C.; Scotland County, N.C.)	4,625	5,082
3	Piedmont section of North and South Carolina (Anderson, Greenville, Spartanburg Counties, S.C.; Mecklenburg, Cleveland, Union Counties, N C.)	2,635	4,383
4	North central section of North Carolina (Nash, Wilson, Franklin, Edgecombe Counties)	968	834

INSECTS AFFECTING MAN AND ANIMALS

CATTLE GRUBS (*Hypoderma* spp.) - Grubs appearing in backs of cattle in Cache County. They appeared a few weeks earlier in Washington and Kane Counties. (Knowlton). OKLAHOMA - Counts of *H. lineatum* ranged 4-15 grubs per animal in 60 feedlot yearlings in Love County (Vinson), 6 per animal in 120 two-year-old steers in Woodward County and 3 per animal in 100 mature cows in Payne County (Howell, Dec. 19). *H. lineatum* found infesting only 8 (6 grubs per animal) of 88 head of 300-pound yearlings in Johnston County (Vinson), averaged 17 per animal in 450 yearling steers in Beaver County and 14 per animal on 60 yearling heifers in Blaine County (Wills, Howell).

CATTLE LICE - OKLAHOMA - Moderate to heavy populations on cattle in Johnston County. (Vinson).

STORED-PRODUCT INSECTS

RED FLOUR BEETLE (*Tribolium castaneum*) - TEXAS - Annoying residents and attacking foodstuff in Comanche County. (Texas Coop. Rpt.).

MISCELLANEOUS INSECTS

ELM LEAF BEETLE (*Galerucella xanthomelaena*) - OKLAHOMA - Invading many homes in central and eastern areas, causing concern by their presence. (Howell). A few to several dozen adults found overwintering in garages in Payne County. (Walton).

CORRECTIONS

CEIR 9(20):389 - A LEAF GALL MIDGE (Cecidomyia ocellaris) should read (*Itonida* ocellaris). correction made

CEIR 9(51):1049 - CHINCH BUG - KANSAS - Last phrase should read "...severe in McPherson County (1544 per square foot)." do not have orig. publ

LIGHT TRAP COLLECTIONS

	Pseudaletia unipuncta	Laphygma frugiperda	Peridroma margaritosa	Agrotis ypsilon	Feltia subterranea
FLORIDA					
Monticello 12/10	2				
Gainesville 12/16	1				
Quincy 12/14	1				
SOUTH CAROLINA					
Charleston 12/14-20	7	1		9	21
TEXAS					
Brownsville 12/9-11	12	9	6	5	5

STATE CLEARING OFFICES

For Economic Insect Survey Reports

Alabama	Dr. F. S. Arant, Head, Department of Zoology and Entomology, Auburn University, Auburn
Alaska	Dr. Richard H. Washburn, Entomology Department, Agricultural Experiment Station, Palmer
Arizona	Dr. J N. Roney, Extension Entomologist, University of Arizona, 1201 W. Madison St., P. O. Box 751, Phoenix
Arkansas	Mr. Gordon Barnes, Extension Entomologist, University of Arkansas, Fayetteville
California	Mr. R. W. Harper, Chief, Bureau of Entomology, State Department of Agriculture, Sacramento 14
Colorado	Dr. Leslie B. Daniels, Head, Department of Entomology, Colorado State University, Ft. Collins
Connecticut	Mr. J. Peter Johnson, Associate Entomologist, Agricultural Experiment Station, P. O. Box 1106, New Haven 4
Delaware	Dr. Dale F. Bray, Chairman, Department of Entomology University of Delaware, Newark
Florida	Dr. W. G. Cowperthwaite, Plant Commissioner, State Plant Board of Florida, Gainesville
Georgia	Dr. C. R. Jordan, Jr., Extension Entomologist, University of Georgia,College of Agriculture, Athens
Hawaii	Division of Entomology & Marketing, Board of Agriculture and Forestry, Honolulu 1
Idaho	Dr. H. C. Manis, Head, Department of Entomology, University of Idaho, Moscow
Illinois	Dr. H. B. Petty, Jr., Extension Entomologist, Illinois Agricultural Extension Service, 280 Natural Resources Building, Urbana
Indiana	Dr. John V. Osmun, Head, Department of Entomology, Purdue University, Lafayette
Iowa	Dr. H. M. Harris, Head, Department of Zoology and Entomology, Iowa State University, Ames
Kansas	Dr. Herbert Knutson, Head, Department of Entomology, Kansas State University, Manhattan
Kentucky	Dr. Lee H. Townsend, Head, Department of Entomology, University of Kentucky, Lexington 29
Louisiana	Dr. L. D. Newsom, Head, Entomology Research, Louisiana State University, Baton Rouge 3

Maine	Dr. G. W. Simpson, Head, Department of Entomology, University of Maine, Orono
Maryland	Mr. T. L. Bissell, Department of Entomology, University of Maryland, College Park
Massachusetts	Dr. E. H. Wheeler, Extension Entomologist, University of Massachusetts, Amherst
Michigan	Mr. Ray Hutson, Head, Department of Entomology, Michigan State University, East Lansing 13
Minnesota	Dr. D. M. Coe, Director, Division of Plant Industry, Department of Agriculture, Dairy and Food, 312 Coffey Hall, University Farm, St. Paul 1
Mississippi	Dr. R. E. Hutchins, Head, Department of Zoology and Entomology, Mississippi State University, State College
Missouri	Mr. Stirling Kyd, Extension Entomologist, Department of Entomology, University of Missouri, Columbia
Montana	Dr. J. H. Pepper, Head, Department of Zoology and Entomology, Montana State College, Bozeman
Nebraska	Dr. Roscoe E. Hill, Chairman, Department of Entomology, University of Nebraska, Lincoln 3
Nevada	Mr. Lee M. Burge, Director, Division of Plant Industry, Department of Agriculture, P. O. Box 1027, Reno
New Hampshire	Dr. J. G. Conklin, Professor of Economic Entomology, University of New Hampshire, Durham
New Jersey	Dr. B. B. Pepper, Department of Entomology, Rutgers University, New Brunswick
New Mexico	Mr. Dallas Rierson, Director, State Department of Agriculture, New Mexico State University, University Park
New York	Dr. A. A. Muka, Extension Entomologist, Department of Entomology and Limnology, Cornell University, Ithaca
North Carolina	Mr. George D. Jones, Extension Entomologist, North Carolina State College of Agriculture, Raleigh
North Dakota	Dr. J. R. Dogger, Chairman, Department of Entomology, North Dakota Agricultural College, State College Station, Fargo
Ohio	Dr. C. R. Neiswander, Associate Chairman, Department of Zoology and Entomology, Ohio Agricultural Experiment Station, Wooster
Oklahoma	Dr. D. E. Howell, Head, Department of Entomology, Oklahoma State University, Stillwater
Oregon	Mr. Joseph Capizzi, Survey Entomologist, Division of Plant Industry, State Department of Agriculture, Salem

Pennsylvania	Mr. J. O. Pepper, Extension Entomologist, Zoology and Entomology Department, Pennsylvania State University, University Park
Puerto Rico	Agricultural Experiment Station, Rio Piedras
Rhode Island	Dr. F. L Howard, Head, Department of Plant Pathology and Entomology, University of Rhode Island, Kingston
South Carolina	Mr. W. C. Nettles, Leader, Extension Entomology and Plant Disease Work, Clemson Agricultural College, Clemson
South Dakota	Dr. G. B. Spawn, Head, Department of Entomology and Zoology, South Dakota State College of A & M Arts, College Station
Tennessee	Mr. R. P. Mullett, Extension Entomologist and Plant Pathologist, College of Agriculture, University of Tennessee, Knoxville 16
Texas	Dr. J C. Gaines, Head, Department of Entomology, Texas A & M College, College Station
Utah	Dr. George F. Knowlton, Extension Entomologist, Utah State University, Logan
Vermont	Mr. John W. Scott, Director, Division of Plant Pest Control, State Department of Agriculture, Montpelier
Virginia	Dr. J. O. Rowell, Extension Entomologist, Virginia Polytechnic Institute, Blacksburg
Washington	Dr. Horace S. Telford, Chairman, Department of Entomology, Washington State University, Pullman
West Virginia	Dr. C. K. Dorsey, Professor of Entomology, West Virginia University, Morgantown
Wisconsin	Mr. E. L. Chambers, Chief, Plant Industry Division, Department of Agriculture, 448 W. Washington Avenue, Madison 3
Wyoming	Mr. T. R. Robb, Extension Entomologist, University of Wyoming, Laramie

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STATUS OF SOME IMPORTANT INSECTS IN THE UNITED STATES

SWEETCLOVER APHID (Therioaphis riehmi (Borner))

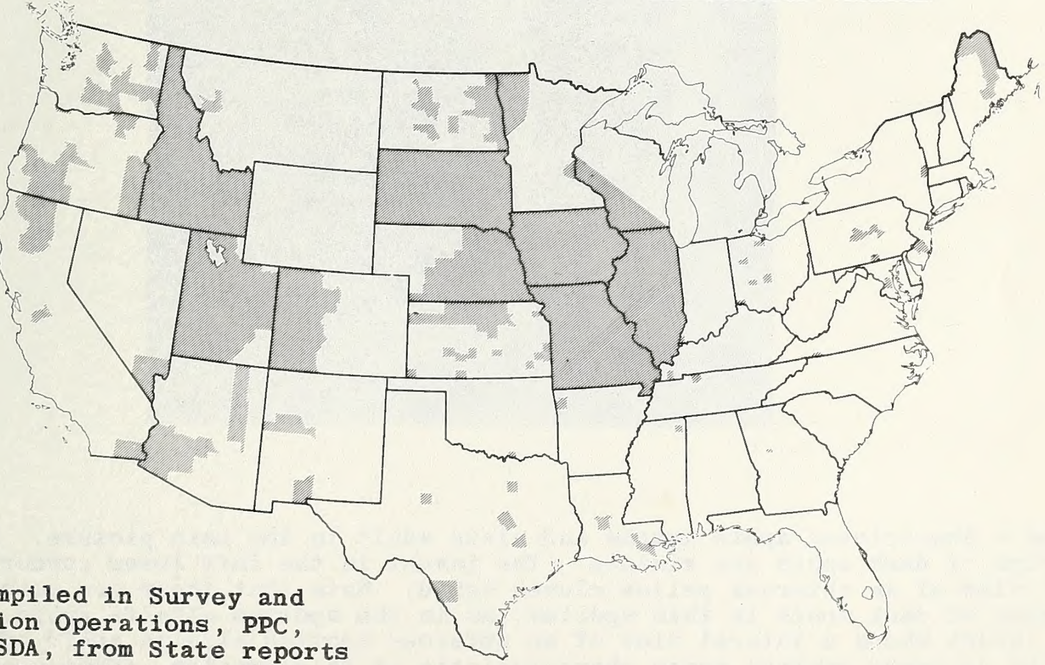
Economic Importance: This aphid was first described in Europe in 1949. It was apparently found for the first time in the United States in connection with surveys to determine the extent of infestation of spotted alfalfa aphid (Therioaphis maculata). Losses of economic importance were first reported from Minnesota in 1955.

Distribution: T. riehmi is doubtless present in much of Europe, as it is known to occur in England, France, Germany and the Netherlands. Specimens have also been found in Iran. In America it is established from the Atlantic Ocean to the Pacific and from the southern borders of the United States northward into Canada (see map for distribution in the U. S.).

Hosts: Studies that were conducted in Kansas show that T. riehmi is confined to species of the genera Melilotus (sweetclover) and Trigonella. The insect did not reproduce on any of more than 50 other species of legumes studied. Differences in infestations have been observed in the field on varieties of Melilotus but often these were related to stage and type of growth. Additional field studies show that alfalfa and red clover were immune to T. riehmi. Resistance was also evidenced in several species of Melilotus.

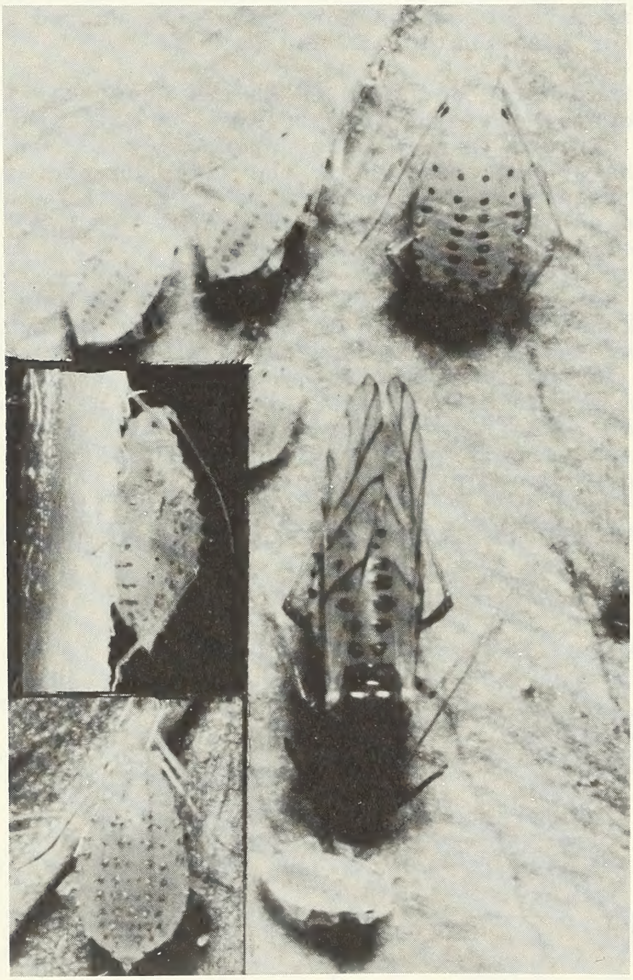
Life History and Habits: No detailed life history study has been published. Observations in Kansas indicate an initial buildup of aphids in the spring through the blossoming period, a decrease during the formation of seeds, and another increase in the fall on first-year plants of biennial varieties. Late in the fall, eggs are laid by apterous females. All males and viviparous females are winged. In the presence of functional males and egg-laying females, this species differs from T. maculata where virtually all females are viviparous and the few males produced are nonfunctional.

DISTRIBUTION OF SWEETCLOVER APHID (Therioaphis riehmi)



Map compiled in Survey and Detection Operations, PPC, ARS, USDA, from State reports received to December, 1959, ARS and USNM records

Description: Usually winged. Pale yellow or whitish, with four rows of black spots on the abdomen; eight somewhat transverse spots in a submedian row and six subcircular spots in a marginal row, on each half of the body. Body 2.25 to 2.65 mm. long. Sweetclover aphid can be separated from spotted alfalfa aphid and yellow clover aphid (T. trifolii) as indicated in the illustration below. (Prepared in Survey and Detection Operations in cooperation with other ARS agencies. Special material on the studies conducted in Kansas furnished by R. H. Painter and descriptive material furnished by L. M. Russell). CEIR 10 (1): 1-1-60.



Figures - Sweetclover aphid nymphs and alate adult in the main picture. Note four rows of dark spots are visible. The insect in the left lower corner is a dorsal view of an apterous yellow clover aphid. Note that there are more than four rows of dark spots in this species, as in the spotted alfalfa aphid. The other insert shows a lateral view of an apterous spotted alfalfa aphid adult with the darkened ventral areas characteristic of this species. (Photograph courtesy of Kansas Agricultural Experiment Station).

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